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EXAMINER	
ZHU, RICHARD Z	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,130	MIYAMOTO, RYOSUKE	
	Examiner	Art Unit	
	RICHARD Z. ZHU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-14,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 6-14, 17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/30/2008 has been entered.

Response to Applicant's Arguments

2. Applicant argued that ***Gehman*** teaches only estimating actual power consumption and does not teach at least storing, calculating, or reading out a power consumption amount per unit time for each operation mode and operation time data for each operation mode, the examiner disagrees.

There is no such thing on this plane of existence as 100% accuracy when it comes to measurement and calculation therefrom. All measurement devices, no matter how finely calibrated they are, can only put forth the most reasonable estimate. In Col 6, Rows 12-28 of ***Gehman***, the coefficients and constants used to calculate power consumption are derived from an actual power curve derived from physical testing of the processor to determine the power and energy consumed for each operating instruction. Furthermore, ***Gehman*** defined that average power is "the rate of energy consumption over a period of time" **(Col 3, Rows**

13-14). Therefore, average operation power Po of figure 4 meets the limitation the applicant alleged ***Gehman*** does not teach by teaching at least calculating average power or rate of energy consumption over a period of time (**number of clock cycles starting from the very beginning of the instruction to the very end, Col 6, Rows 38-39 and Col 9, Rows 1-9 and see Fig 5, parameter K**) whereas "power" is defined as rate of consumption of electrical energy (**Col 3, Row 11-12**).

The applicant further argued that the reference does not teach "timing operation time data from a start to an end of a predetermined operation mode as an intermittent operation time corresponding to job execution scheduling according to other operation modes". The examiner disagrees.

First, ***Gehman*** discloses in order to create the database that contains all the constants and coefficients for each distinct instruction, the processor is physically tested to determine the power and energy consumed for each operation instruction and each internal action (**Col 6, Rows12-28**). Second, among the parameters within said database is K, or number of clock cycles needed for an instruction to execute from the very beginning to the very end (**Col 6, Rows 30-40**). Third, during testing, a sequence of instructions is scheduled in a scheduled task list one after another or in an intermittent operation timely fashion (**Col 7, Rows 33-65 and see Fig 7**). Therefore, ***Gehman*** meets the claimed limitation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 6-7, 9-14, and 17-18 are rejected under 35 USC 103(a) as being unpatentable over ***Gehman et al. (US 6002878 A)*** in view of ***Shishizuka et al (US 6347202B1)***.

Regarding Claims 1, 12, and 17, ***Gehman*** discloses an information processing apparatus (**Fig 3, Computer System 58**) having a plurality of processors (**Col 3, Rows 26-38**), testing one processor at a time (**Col 3, Rows 26-38**), each processor having a plurality of operation modes (**Col 3, Row 60 – Col 4, Row 7, sequential listing 44 comprises a plurality of operating instructions 38**) including a first mode for performing a first instruction and a second mode for performing a second instruction (**Col 7, Rows 39-52**), the information processing apparatus comprising:

memory means (**Fig 3, Memory 60**) for storing and reading out (**Fig 4B**) a power consumption amount per unit time (**Col 4, Rows 45-50, average operation power is the average power consumption or energy consumed per unit of time whereas average operation power 74 is calculated for each operation instruction 38 or operation modes**) for said each operation mode and operation time data for said each operation mode (**Fig 4B, Clock Frequency 106 in Cycles per second and Operation Clock Cycles 126 in unit of cycles are recorded each operation instruction 38**), wherein the operation time data is

counted during operation of the process when executing a specific instruction or process **(Col 6, Rows 14-24 and Col 6, Rows 37-38 and see Fig 5, parameter K represent number of clock cycles for each specific instruction. As such, when the processor is physically tested, the number of clock cycles from the very beginning to the very end of said instruction is timed)**;

preparation means **(Fig 3, Computer System 58 implementing Process 58 of Fig 1)** for preparing statistic information concerning a power consumption amount of said information processing apparatus based on the power consumption amount per unit time and the operation time data for said each operation mode **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B)**; and

output means **(Fig 3, Presentation Device 64)** for performing an output based on the prepared statistic information concerning power consumption **(Col 4, Rows 32-34, presentation device being a video display terminal and/or a printer)**.

Gehman does not disclose an image processing apparatus having a first mode for outputting image data read by image reading means and a second mode for outputting print data received from the outside.

Shishizuka discloses an image processing apparatus **(Col 6, Rows 38-58, Composite Image Forming Apparatus)** having a first mode for outputting image data read by image reading means **(mode for reading in scanned images)** and a second mode for outputting print data received from the outside **(mode for printing images and see Col 6, Rows 53-58,**

network interface for sending and receiving data from an external device) that compiles and analyze power consumption information (**Col 1, Rows 29-59**).

It would've been obvious to one of ordinary skill in the art at the time of the invention to implement the system of ***Gehman*** in a scenario using the image processing apparatus of ***Shishizuka***, such that a first mode for performing a first instruction would correspond to a first mode for outputting image data read by image reading means and a second mode for performing a second instruction would correspond to a second mode for outputting print data received from outside, whereas the motivation would've been to provide the user of ***Shishizuka***'s image processing apparatus with detailed statistical information on power amount consumption in an effort to minimize power consumption (***Gehman,*** **Col 9, Rows 54-61**).

Regarding the Computer Program residing on a statutory computer readable medium, ***Gehman*** discloses an application program 56 executed on computer system 58 (**Col 4, Rows 15-18**).

Regarding Claims 10, 13, and 18, ***Gehman*** discloses an information processing apparatus (**Fig 3, Computer System 58**) having a plurality of processors (**Col 3, Rows 26-38**), testing one processor at a time (**Col 3, Rows 26-38**), each processor having a plurality of operation modes (**Col 3, Row 60 – Col 4, Row 7, sequential listing 44 comprises a plurality of operating instructions 38**) including a first mode for performing a first instruction and a second mode for performing a second instruction (**Col 7, Rows 39-52**), the information processing apparatus comprising:

calculation means **(Fig 3, Computer System 58 implementing Process 58 of Fig 1)** for calculating power consumption amount of said information processing apparatus for each of the operation modes based on a power consumption amount per unit time for each operation mode and operation time data for each operation mode **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B)**, wherein the operation time data is counted during operation of the process when executing a specific instruction or process **(Col 6, Rows 14-24 and Col 6, Rows 37-38 and see Fig 5, parameter K represent number of clock cycles for each specific instruction. As such, when the processor is physically tested, the number of clock cycles from the very beginning to the very end of said instruction is timed)**; and

output means **(Fig 3, Presentation Device 64)** for outputting information on the power consumption calculated by said calculation means to the information processing apparatus **(Col 4, Rows 32-34, presentation device being a video display terminal and/or a printer)**,

wherein the information processing apparatus generates statistic information based on the information output by said output means **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B)**.

Gehman does not disclose an image processing apparatus communicating with the information processing apparatus having a plurality of operation modes including a first mode for outputting image data read by image reading means and a second mode for outputting print data received from the outside.

Shishizuka discloses an image processing apparatus (**Col 6, Rows 38-58, Composite Image Forming Apparatus**) communicating with an information processing apparatus (**Col 6, Rows 53-58, network interface for sending and receiving data from an external device**) having a first mode for outputting image data read by image reading means (**mode for reading in scanned images**) and a second mode for outputting print data received from the outside (**mode for printing images and see Col 6, Rows 53-58, network interface for sending and receiving data from an external device**) that compiles and analyze power consumption information (**Col 1, Rows 29-59**).

It would've been obvious to one of ordinary skill in the art at the time of the invention to implement the system of ***Gehman*** on the image processing apparatus of ***Shishizuka***, such that a first mode for performing a first instruction would correspond to a first mode for outputting image data read by image reading means and a second mode for performing a second instruction would correspond to a second mode for outputting print data received from outside, and further connect the information processing apparatus of ***Gehman*** with the image processing apparatus of ***Shishizuka*** via the network interface whereas the motivation would've been to provide the user of ***Shishizuka***'s image processing apparatus with detailed statistical information on power amount consumption in an effort to minimize power consumption (***Gehman,*** **Col 9, Rows 54-61**).

Regarding Claims 11 and 14, ***Gehman*** discloses an information processing apparatus (**Fig 3, Computer System 58**) having a plurality of processors (**Col 3, Rows 26-38**), testing one processor at a time (**Col 3, Rows 26-38**), each processor having a plurality of operation modes (**Col 3, Row 60 – Col 4, Row 7, sequential listing 44 comprises a plurality of operating instructions 38**) including a first mode for performing a first instruction and a second mode for performing a second instruction (**Col 7, Rows 39-52**), the information processing apparatus comprising:

timing means (**Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 and see Col 9, Rows 1-8, task 170 obtains number of clock cycles 126 for operating instruction 38 in order to calculate power consumption per unit time, or average operation power 74**) for timing operation time data from a start to an end of a predetermined operation mode as an intermittent operation time (**Col 7, Rows 33-52, one operation mode follow another operation mode on an intermittent operation schedule and time**) corresponding to job execution scheduling according to other operation modes (**Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B whereas sequence listing 44 is substantially the equivalent of job execution scheduling**), wherein the operation time data is counted during operation of the process when executing a specific instruction or process (**Col 6, Rows 14-24 and Col 6, Rows 37-38 and see Fig 5, parameter K represent number of clock cycles for each specific instruction. As such, when the**

processor is physically tested, the number of clock cycles from the very beginning to the very end of said instruction is timed); and

preparation means **(Fig 3, Computer System 58 implementing Process 58 of Fig 1)** for preparing information concerning a power consumption amount of the predetermined operation mode based on the operation time data timed by the timing means and a power consumption amount per unit time for the predetermined operation mode **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B)**.

Gehman does not disclose an image processing apparatus having a first mode for outputting image data read by image reading means and a second mode for outputting print data received from the outside.

Shishizuka discloses an image processing apparatus **(Col 6, Rows 38-58, Composite Image Forming Apparatus)** having a first mode for outputting image data read by image reading means **(mode for reading in scanned images)** and a second mode for outputting print data received from the outside **(mode for printing images and see Col 6, Rows 53-58, network interface for sending and receiving data from an external device)** that compiles and analyze power consumption information **(Col 1, Rows 29-59)**.

It would've been obvious to one of ordinary skill in the art at the time of the invention to implement the system of ***Gehman*** in a scenario using the image processing apparatus of ***Shishizuka***, such that a first mode for performing a first instruction would correspond to a first mode for outputting image data read by image reading means and a second mode for

performing a second instruction would correspond to a second mode for outputting print data received from outside, whereas the motivation would've been to provide the user of ***Shishizuka***'s image processing apparatus with detailed statistical information on power amount consumption in an effort to minimize power consumption (***Gehman,* Col 9, Rows 54-61**).

Regarding Claim 2, ***Gehman*** discloses the image processing apparatus further comprising timing means for timing operation time data of the respective operation modes individually (**Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 and see Col 9, Rows 1-8, task 170 obtains number of clock cycles 126 for each operating instruction 38 in order to calculate power consumption per unit time, or average operation power 74**), wherein said preparation means prepares statistic information based on a value timed by said timing means and the power consumption amount per unit time for each operation mode (**Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B**).

Regarding Claim 6, ***Shishizuka*** discloses the image processing apparatus (**Col 6, Rows 38-58, Composite Image Forming Apparatus**) wherein the first mode is a copy mode (**scanner function or mode for reading in scanned images**) and the second mode is a printer mode (**printer function or mode for printing images**).

Regarding Claim 7, ***Gehman*** discloses wherein said output means outputs the prepared statistic information concerning power consumption to a display unit (**Col 4, Rows**

32-34, presentation device being a video display terminal and/or a printer) during designated processing for designating the operation mode or during execution of the operation mode (**Col 9, Rows 34-38, task 182 that sends data out for display follows tasks that calculated the power consumption per unit time for each operation instruction or mode**).

Regarding Claim 9, ***Gehman*** and ***Shishizuka*** discloses image-processing apparatus further comprising an information processing apparatus (***Gehman,* Fig 3, Computer System 58 and see Col 4, Rows 30-35**) capable of communicating with said image processing apparatus (***Shishizuka,* Col 6, Rows 38-58, Composite Image Forming Apparatus and see Col 6, Rows 53-58, network interface for sending and receiving data from an external device**).

5. Claims 3 and 8 are rejected under 35 USC 103(a) as being unpatentable over ***Gehman et al. (US 6002878 A)*** and ***Shishizuka et al (US 6347202B1)*** in view of ***Cmar (US 5566084 A)***.

Regarding Claim 3, ***Gehman*** discloses wherein said preparation means (**Fig 3, Computer System 58 implementing Process 58 of Fig 1**) prepares statistic information based on the timed value, the power consumption amount per unit time for said each operation mode (**Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B**).

The combined teaching does not disclose the image processing apparatus further comprising management means for managing statistical information by associating the

statistical information with timing value by said timing means, wherein said preparation means prepares statistic information based on the timed value, the power consumption standard for each operation mode, and the user identification information.

Cmar discloses a managing process for managing user or department identification information by associating the user or department identification information with timing value by a timing mean (**Fig 8 A-C where Fig 8A and 8B shows a statistical graph of average power consumption per unit time vs. unit of time in an entire day and Fig 8C shows all the user or department that is associated with the statistics. For example, user or department "Customer Service", "Production", "Machine Shop", "Building 79", "Building 78"**).

It would've been obvious to one of ordinary skill in the art at the time of the invention to incorporate the managing process of ***Cmar*** into the image processing apparatus of the combined teaching so that the Computer System 58 can implement a management process for managing statistical information by associating the statistical information with timing value by the timing means and that preparation means prepares statistic information based on the timed value, the power consumption standard for each operation mode, and the user identification information, whereas the motivation would've been to provide a statistical processing system that provides a user with comprehensive overview of power consumption within a system for the purpose of energy conservation (***Cmar*, Col 4, Rows 47-59**).

Regarding Claim 8, ***Gehman*** discloses the image processing apparatus further comprising:

timing means for timing an operation time of said image processing apparatus by associating the operation time with a specified processor **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 and see Col 9, Rows 1-8, task 170 obtains number of clock cycles 126 for operating instruction 38 in order to calculate power consumption per unit time, or average operation power 74)** out of a plurality of processors **(Col 3, Rows 25-38)**.

wherein said memory means **(Fig 3, Memory 60)** stores the timed operation time as the operation time data **(Col 4, Rows 45-50, average operation power is the average power consumption or energy consumed per unit of time whereas average operation power 74 is calculated for each operation instruction 38 or operation modes)**, and said preparation means prepares the statistic information for each processor **(Col 4, Rows 42-54 and see Col 5, Rows 4-16, Process 54 place Computer System 58 to prepare statistical information on power consumption amount per unit time and time information for each instruction process or mode executed as shown in Fig 4B, for the processor under examination)**.

Gehman does not disclose a specifying means for specifying a user or a using department which uses said image-processing apparatus.

Cmar discloses a managing process for specifying a user or a using department which uses a facility that consumes electricity **(Fig 8C shows all the user or department that is associated with the statistics. For example, user or department "Customer Service", "Production", "Machine Shop", "Building 79", "Building 78")** and associating time with the specified user or using department **(Fig 8A-B)**.

It would've been obvious to one of ordinary skill in the art at the time of the invention to incorporate the managing process of ***Cmar*** into the image processing apparatus of the combined teaching so that the Computer System 58 can implement a management process for managing statistical information by associating the statistical information with timing value by the timing means and that preparation means prepares statistic information by associating operation timed value of instruction or operation modes and power consumption amount with respect to a user or a using department operating the apparatus whereas the motivation would've been to provide a statistical processing system that provides comprehensive overview of power consumption within a system for the purpose of energy conservation (***Cmar*, Col 4, Rows 47-59**).

6. Claim 5 is rejected under 35 USC 103(a) as being unpatentable over ***Gehman et al. (US 6002878 A)*** and ***Shishizuka et al (US 6347202B1)*** in view of ***Alsop (US 6795829 B2)***.

The combined teachings of ***Gehman*** and ***Shishizuka*** disclose the subject matter of Claim 1 from which Claim 5 is dependent upon.

Furthermore, ***Gehman*** discloses sending prepared statistic information concerning power consumption to a terminal apparatus external to the information processing apparatus (**Col 9, Rows 22-38**).

However, said combined teachings does not wherein said output means sends the statistic information to a terminal apparatus external to said image processing apparatus as a markup language.

Alsop discloses in Fig 1, a central computer 2 that act as a fulcrum to exchange information with various devices in a network. Furthermore, ***Alsop*** discloses in (**Col 4, Rows**

20-25) that markup language HTML can be employ as the protocol to communicate information over the network to an external terminal apparatus (**Fig 1**).

Alsop is the field of communicating information comprising user identification, power consumption, time value, and etc (***Fig 2 and Fig 3***) to external terminal apparatus.

It would've been obvious to one of ordinary skill in the art at the time of the invention to configure the output means of ***Gehman*** and ***Shishizuka*** to communicate statistical information to a terminal apparatus using markup language as suggested by ***Alsop*** in order to properly communicate information over a network or server.

Therefore, it would've been obvious to combine ***Alsop*** with ***Gehman*** and ***Shishizuka*** to attain the invention of Claim 5.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 6:30 - 5:00.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RZ^2
03/25/2008

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